



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,529	02/24/2004	Donald A. Meltzer	202ES048A	1543
37535	7590	03/16/2011	EXAMINER	
THE LUBRIZOL CORPORATION			SERGEANT, RABON A	
29400 LAKELAND BLVD				
MAIL DROP 022B			ART UNIT	PAPER NUMBER
WICKLIFFE, OH 44092-2298			1765	
			MAIL DATE	DELIVERY MODE
			03/16/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/785,529	MELTZER ET AL.
	Examiner Rabon Sergeant	Art Unit 1765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 19 January 2011.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,3,4,7,13,19,20,23,24,27,28,31,32,35-39,44 and 46-48 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,3,4,7,13,19,20,23,24,27,28,31,32,35-39,44 and 46-48 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of Patentability Cited (PTO-592)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-113)
Paper No(s)/Mail Date _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 19, 2011 has been entered.

2. Claims 1, 3, 4, 7, 13, 19, 20, 23, 24, 27, 28, 31, 32, 35-39, 44, and 46-48 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Despite applicants' remarks, adequate support has not been provided for the claimed ($V_f(T_m+15)$) value range of independent claims 1 and 35. Paragraph [0046] of the specification does not provide support for the endpoint value of 5. Furthermore, given the limited scope of examples 14 and 16, as compared to the scope of the claims, these examples fail to provide adequate support for the claimed endpoint for the full scope of the claims.

3. Claims 3, 7, 13, 20, 24, 28, 32, 47, and 48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 3, 7, 13, 47, and 48, the claimed $V_f(T_m+15)$ value fails to further limit independent claims 1 and 35.

With respect to claim 13, the claimed V_f value (criteria E) fails to further limit independent claim 1.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 3, 4, 7, 13, 19, 20, 23, 24, 27, 28, 31, 32, 35-39, 44, and 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ehrlich et al. ('904) in view of van Der wal et al. ('445) and Mao ('572).

Ehrlich et al. disclose thermoplastic polyurethanes, wherein MDI is reacted with a blend of polyester polyol (b) and polyether polyol (i) and/or (ii), wherein the polyester polyol component and polyether polyol relative amounts meet those claimed, in that at least about 15 percent by weight of the polyester polyol is replaced by the aforementioned polyether polyol, and a chain extender component, wherein the chain extender component comprises straight chain diols, wherein 1,4-butanediol is preferred, and further wherein, in a preferred embodiment, up to 25 equivalent (molar) percent of the chain extender may be branched chain aliphatic diols having 3-6 carbon atoms, which encompasses 1,3-butanediol. See abstract; column 2, lines 40+; column

3, lines 6-43; columns 4-6; and column 7, lines 1-50, especially column 3, lines 38-43.

Applicants' claimed polybutylene adipate polyester polyol is disclosed as being preferred at column 5, lines 21-23. Applicants' catalyst amount of claim 36 is disclosed at column 7, lines 47-50. Furthermore, patentees disclose the use of extrusion equipment and conventional processes for producing the thermoplastic polyurethane; therefore, applicants' claimed twin screw extruder and processing times (claims 37 and 39) are considered to be encompassed by patentees. Given the disclosed amounts of polyols and chain extenders, applicants' claimed ratio is considered to be met. The ratios of claims 44 and 46 are met by the disclosure at column 6, lines 37-49.

6. However, the primary reference is silent regarding the use of polyoxytetramethylene polyols and the use of the thermoplastic polyurethane to produce coated fabrics and conveyor belts. With respect to the issue of the polyoxytetramethylene polyol, van Der wal et al. disclose thermoplastic polyurethanes derived from blends of polyester diols and polyether diols, wherein the respective amounts of the polyester diol and polyether diol satisfy that instantly claimed and further wherein a suitable polyether diol is disclosed as being polyoxytetramethylene diol (column 3, lines 67 and 68). While van Der wal et al. disclose such polyols as polyoxypropylene-polyoxyethylene glycol, van Der wal et al. further disclose at column 4, lines 8 and 9 that poly(tetramethylene oxide) diol (aka: polyoxytetramethylene polyol) is the most preferred polyether polyol. Therefore, the secondary reference establishes that the use of applicants' claimed diol within an analogous thermoplastic polyurethane was not only known at the time of invention, its use was preferred. Accordingly, it would have been obvious to incorporate such a polyether diol in the claimed amount into the composition of the primary

reference, so as to arrive at the instant invention. With respect to the issue of the production of coated fabrics and conveyor belts, it is noted that both van Der wal et al. and Mao disclose the production of thermoplastic polyurethanes, derived from blends of polyester polyols and polyether polyols, that are considered to be analogous to those of the primary reference, and further that van Der wal et al. disclose the production of conveyor belts and Mao discloses the production of coated fabrics (abstracts). Accordingly, since these applications for analogous thermoplastic polyurethanes were known at the time of invention, the position is taken that it would have been obvious to utilize the thermoplastic polyurethane composition of Ehrlich et al. to produce the instantly claimed coated fabrics and conveyor belts.

7. Applicants' response of January 19, 2011 has been considered; however, it is insufficient to overcome the prior art rejection. Applicants have amended their claims to be more commensurate in scope with their examples and have argued that their showings rebut the prima facie case of obviousness. The examiner has again considered the showings within the specification and the 37 CFR 1.132 declaration, filed July 8, 2010. With respect to the examples set forth within Table I and the first Table II of the declaration, it is noted that these examples have been previously considered by the examiner, since they are set forth within the specification. Despite applicants having amended the independent claims, the position is maintained that the examples are not adequately commensurate in scope with the claims and that the invention has not been compared against the closest available art, namely Ehrlich et al. It has been held that the claims must be commensurate in scope with any showing of unexpected results. *In re Greenfield*, 197 USPQ 227. It has further been held that a limited showing of criticality is insufficient to support a broadly claimed range. *In re Lemin*, 161 USPQ 288. With

these requirements in mind, applicants' examples of their invention are not adequately commensurate in scope with the claims in terms of copolyol amount, ratio of mole percent co-chain extender to weight percent of co-polyol, and stoichiometry. Furthermore, it is noted that applicants' comparative examples within the specification fail to be representative of Ehrlich et al., because the exemplified comparative compositions fail to employ Ehrlich et al.'s disclosed polyol and the preferred chain extender blends. Furthermore, the examples set forth within the second Table II are deficient for the same reasons. Specifically, Inventive Example A is not adequately representative of the scope of the claimed invention and Comparative Example B does not utilize a formulation that is representative of the primary reference. With respect to Comparative Example B, the poly(oxyethylene-co-oxypropylene) diol is not adequately representative of the prior art. Given the disparity between the respective molecular weights of the polyol used by applicants and the polyol disclosed within the reference, it is by no means clear that the skilled artisan would expect the properties set forth within the declaration to be representative of the prior art. With respect to applicants' arguments concerning the comparison of examples 2, 5, 9, 10, 14, and 16 to examples 3, 12, and 13, the examiner takes the following positions. Firstly, claims 9 and 10 are no longer representative of the instant invention in view of applicants' amendments. Secondly, it is unclear that a deviation in the $V_f(T_m+15)$ value from 6 to 4 or 5 constitutes an unexpected result; while the examiner acknowledges the difference, it is unclear that the difference rises to the level of constituting a result adequate to rebut the *prima facie* case of obviousness.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

*/Rabon Sergent/
Primary Examiner, Art Unit 1765*